

## **REMARKS/ARGUMENTS**

### **I. Status of the Claims**

Claims 1-43 and 45-91 are pending. Claims 1-40 and 48-90 are allowed. Claims 41-43, 45-47 and 91 remain under rejection.

### **II. The Present Amendment**

No new matter has been added by the amendments herein. The recitation of claim 44 has been incorporated into claim 41, and claim 44 has, accordingly, been canceled. The amendment is supported throughout the specification, including claim 44 as filed.

### **III. The Office Action, and Response Thereto**

Applicants note with appreciation the withdrawal in the Action of the previous rejections under 35 U.S.C. § 112 second paragraph and the allowance of claims 1-40 and 48-90.

The Action rejects claims 41-47 and 91 on a single ground: they are rejected under 35 U.S.C. § 102(e) as being anticipated by Anderson, U.S. Patent No. 6,168,948 B1 ("Anderson"). According to the Action, Anderson teaches an apparatus for detecting a target analyte, in which the apparatus comprises a solid support attached to a capture reagent, which solid support is coated with a non-stick material. According to the Action, the reference further teaches the non-stick coating can be a silanizing agent, such as silane. The Action further states the patent teaches that the solid support can comprise a planar wall having beads attached and that the capture reagent can be non-covalently attached to the solid support. Further, the Action states that the capture reagent can be an antibody. Applicants amend in part and traverse.

Claim 41 has been amended by incorporating into its recitation the particular solid supports recited in claim 44, which has accordingly been canceled. The solid supports recited by the recitation are prongs, dipsticks, glass beads, and magnetic particles. There is no argument in the Action that Anderson teaches non-stick coatings on prongs or dipsticks, so it is understood that these embodiments in themselves are allowable. Applicants respectfully submit that

Anderson also does not teach the use of non-stick coatings on beads or magnetic particles and that the claims as amended are therefore free of the rejection.

Anderson concerns miniature nucleic acid diagnostic devices. See, Anderson at column 5, lines 20-22. The devices are typically composed of channels and fluid passages leading to reaction chambers. Anderson at, e.g., col. 7, lines 43-46. Anderson indicates that "[t]he surfaces of the fluid channels and reaction chambers which contact the samples and reagents may also be modified to better accommodate a desired reaction. . . . For example, in the case of nucleic acid analyses, it may be desirable to coat the surfaces with a non-stick coating, e.g., a Teflon, parylene or silicon, to prevent adhesion of nucleic acids to the surface." *Id.*, at col. 20, lines 27-37. At col. 21, line 67, to col. 22, line 3, the reference states: "Similarly, inert polymer coatings, e.g., Teflon and the like, parylene coatings, or surface silanation modifications may also be applied to internal surfaces of the chambers and/or channels." Thus, Anderson teaches coating the internal surfaces of the chambers and channels with inert coatings.

The apparatuses of the invention, claimed as amended herein, do not read on devices with non-stick coatings applied to the chambers and channels, but to prongs, dipsticks, beads and magnetic particles. Accordingly, they are not anticipated by Anderson's teachings of non-stick coatings of the surfaces of the fluid channels and reaction chambers. Applicants respectfully observe that, to constitute a proper reference for purposes of anticipation, the reference must contain, expressly or inherently, every recitation of the claim under examination.

The Action alleges that columns 47 and 48 of Anderson teach beads and magnetic particles with coated with non-stick coatings. Figure 19 of Anderson (the Figures were not provided to the Applicants with the reference, but were reviewed on the internet) schematically illustrates a microdevice for separating out selected portions of biological samples. See, col. 46, lines 55-56. The microdevice has an input channel and an output channel. *Id.* at col. 47, lines 1-2. Positioned between the input and the output channels is a solid support (labeled "2002" in the Figure, although it is sometimes incorrectly called "2200" in the text), which can be a porous plug or a binding surface disposed in an affinity chamber. Columns 46-47, bridging sentence. Samples introduced into the input channel flow through the solid support. Col. 47, lines 1-3. "Material that is not specifically bound to the array is washed away, and then the purified nucleic

acids are eluted from the support." *Id.*, at lines 3-5. In Figure 19, the support surface of the affinity chamber can be provided by a compressed plug of glass wool. "Preferably, the plug, 2002, is positioned in a vertical portion of the channel." *Id.*, at lines 25-26. In alternative embodiments, "where solid support 2000 comprises a binding surface disposed in an affinity chamber, fluid is passed over this binding surface when moving through the affinity chamber." Col. 47, lines 26-29.

Thus, Anderson distinguishes the plug or binding surface to which the nucleic acids hybridize in this embodiment from the channels and chambers of the solid support of the various devices discussed in the specification, including the device of Figure 19. It is in this context that Anderson states that, in alternative embodiments, the oligos may be tethered to the capture medium, and further indicates that

[t]he capture medium may be a porous material comprising a gel such as a polyacrylamide or agarose, a zeolite, a porous silicon, a controlled-pore glass (CPG), a woven fiberglass, glass wool, magnetic beads, cellulose particles, a porous polymer gel, or a roughened polymer. Alternatively, the capture medium may be a non-porous surface, such as a GeneChip™, glass spheres, magnetic beads, micromachined glass or silicon textures/structures, roughened glass or silicon, or a polyacrylimide [sic] gel layer on glass.

Anderson, col. 47-48, bridging paragraph. Applicants note that, while Anderson discusses the use of non-stick coatings on the channels and chambers of its devices, it does not teach the use of such coatings on the plug of Figure 19 or on any of the various materials, including beads and magnetic particles, mentioned as capture media. Applicants have not noted any mention of a non-stick coating in connection with such media.

Accordingly, Applicants maintain that Anderson does not teach every element of claim 41 as amended, as required for Anderson to constitute a proper anticipatory reference for purposes of 35 U.S.C. § 102(e). Applicants therefore respectfully request that the rejection be

Appl. No. 09/830,976  
Amdt. dated 04/07/2004  
Reply to Office Action of 10/07/2003

PATENT

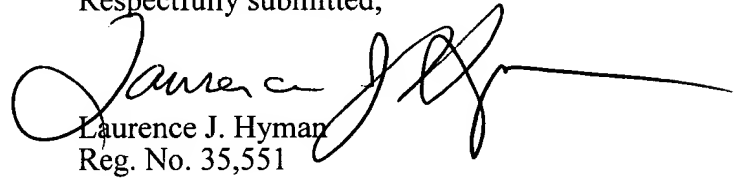
reconsidered in light of the amendments and discussion herein and, upon reconsideration, be withdrawn.

**CONCLUSION**

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 415-576-0200.

Respectfully submitted,

  
Laurence J. Hyman  
Reg. No. 35,551

TOWNSEND and TOWNSEND and CREW LLP  
Two Embarcadero Center, Eighth Floor  
San Francisco, California 94111-3834  
Tel: 415-576-0200  
Fax: 415-576-0300  
Attachments  
LJH:ljh  
60179524 v1